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EXAMINER

BINDA, GREGORY JOHN

ART UNIT

PAPER NUMBER

3679

10

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,345

Applicant(s)

Mizukoshi et al

Examiner

Greg Binda

Art Unit

3679



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Nov 27, 2002

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-6 is/are pending in the application.

4a) Of the above, claim(s) 6 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-5 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on Oct 12, 2001 is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☒ The proposed drawing correction filed on Nov 27, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 7

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

Art Unit: 3679

Election/Restriction

1. Applicant's election with traverse of Group I, Species I (Figs. 1-3) in Paper No. 9 is acknowledged. The traversal is on the ground(s) that it would be prudent for the examiner to examine Groups I & II together because the method in Group II requires some of the same structural limitations found in the product of Group I. This is not found persuasive because the grounds do not refute the fact that the inventions of Groups I & II are distinct and that the search required for Group II is not required for Group I.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 6 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 9.

Drawings

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on Nov 27, 2002 have been approved.

4. The drawings are objected to as failing to comply with:

a. 37 CFR 1.83(a) because the drawings fail to show "a center of a joint" as recited in claim 2, line 11.

Art Unit: 3679

b. 37 CFR 1.84(p)(5) because Figs. 1-3 do not include reference numeral 9 mentioned in the description on page 10, line 13.

5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

7. The disclosure is objected to because:

a. The summary fails to comply with 37 CFR 1.73. The sentence which begins on page 4, line 18 and does not close until page 5, line 18 and the succeeding two sentences which do not conclude until page 6, line last are inappropriate. The summary is supposed to be brief and written in accordance with standard idiomatic English. It is not supposed to be a photocopy of a claim or portions of claims. Nor should it be written in the language structure unique to patent claims.

b. The sentence on page 12, lines 21+ appears to be missing some words.

Art Unit: 3679

- c. The phrase "limited enough small" on page 13, line 15 is unclear.
- d. On page 13, lines 18 & 19, a point 0 is described as "perpendicular to" a shaft. It is not clear how it is geometrically possible for a point to be "perpendicular to" a shaft (or any other object).

8. The specification is objected to as failing to comply with 37 CFR 1.71 and 1.75(d)(1) because the detailed description fails to provide proper antecedent basis for the following claimed subject matter:

- a. Claim 1, line last: the partially cylindrical area "being a face in contact with the inner roller at a joint angle of zero"
- b. Claim 2, lines 9 & 10: an intersection line "being an edge line of the partially cylindrical area at an inner side".

9. The abstract of the disclosure is objected to because it begins with a phrase, "The object of the invention is to provide," that can be implied and it ends with a sentence, "Representative drawing Figure 2" that is inappropriate.

Claim Objections

10. The claims are objected to as failing to comply with 37 CFR 1.75(g) because the least restrictive claim, claim 3, is not presented as claim number 1.

Art Unit: 3679

11. Claim 1 is objected to because in line 14, "outer" (both instances) should be changed to "inner" per page 12, lines 14 & 15. (Note: the outer face of inner ring is cylindrical, not spherical, per page 12, line 17.)

Claim Rejections - 35 U.S.C. § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 1, 2 & 4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a. Claim 1, lines 11 & 12 recites "the outer rollers being shaped so as to allow movement only in an axial direction of the guide grooves". However, to the contrary, in the description of the elected species on page 10, lines 9 & 10, the outer rollers 16 are described as being able to move in the radial direction (see "pivot freely") as well as in the axial direction (see "roll").

b. Claim 1, line last recites that the partially **cylindrical** area of the outer face of the trunnion is "a face in contact with the inner roller at a joint angle of zero" but, to the contrary, the

Art Unit: 3679

drawings (see specifically Figs. 1b and 2) show the generally **spherical** area of the outer face of the trunnion in contact with the inner roller 12 at a joint angle of zero.

c. Claim 4 recites that the inner end diameter (D) of the roller assembly is equal to the diameter (d) of the cylindrical areas. However, to the contrary, in the description on page 13, line 7, the inner end diameter (D) of the roller assembly is described as greater than the diameter (d) of the cylindrical areas.

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 1 & 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1, line 17 recites the limitation “respective outer faces of respective outer face”.

It is not clear what this limitation means.

b. In claim 1, lines 19-21, it is not clear which of the “partially cylindrical area,” the “trunnion centerline” or the “center” is “perpendicular to a trunnion axis”.

c. Claim 2, lines 10 & 11 twice recites the limitation “a joint”. It is not clear if this joint is the same as, or different from the joint recited in line 1.

Art Unit: 3679

d. Claim 2, line 11 recites "a center" but it is not clear where this "center" is located in the claimed invention given that it is not shown in the drawings.

Claim Rejections - 35 U.S.C. § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kudo et al, US 5,791,995.

a. Claim 3. Figs. 1 & 2 show a constant velocity joint 10 comprising: a hollow housing 12 having an open end and an inner face (see also "inner circumferential surface" in col. 3, lines 28 & 29) formed with three axially extending circumferentially spaced guide grooves 18a-18c; a tripod 30 disposed in the housing 12 having three circumferentially spaced trunnions 26a-26c extending radially outwardly along respective trunnion axes into the guide grooves 18a-18c, each trunnion 26a-26c having an outer surface that is part spherical (see also col. 3, line 50); a roller assembly 24, 32, 40 carried on each of the trunnions 26a-26c within the guide grooves 18a-18c and supported for rotational, angular and axial movement relative to the trunnions 26a-26c; and a cylindrical relief area 36 (see also "substantially linear cross section" in col. 3, lines 62 & 63)

Art Unit: 3679

formed on the outer surface of the trunnions 26a-26c. Fig. 15 shows the cylindrical relief area 36 inclined relative to each of the respective trunnion axes.

b. Claim 4. Fig. 1 shows that each roller assemblies 24, 32, 40 has an inner end diameter that is equal to or greater than the diameter of the cylindrical areas 36.

c. Claim 5. Fig. 15 shows that each trunnion 26a includes a trunnion centerline perpendicular to the trunnion axis and that the cylindrical relief area 36 is inclined relative to the trunnion centerline.


Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Roberge shows an inclined cylindrical relief area 5b. Kurado and Bartlett et al each show a trunnion with an inclined cylindrical surface.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached Monday through Thursday from 9:30 am to 7:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne, can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 (before final), (703) 872-9327 (after final) and (703) 872-9325 (customer service).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.


GREGORY J. BINDA
PRIMARY EXAMINER